



DEPARTMENT OF HOMELAND SECURITY

CUSTOMS AND BORDER PROTECTION

NOTICE OF ISSUANCE OF FINAL DETERMINATION CONCERNING CERTAIN MONOCHROME LASER PRINTERS AND REPLACEMENT TONER CARTRIDGES

AGENCY: U.S. Customs and Border Protection, Department of Homeland Security.

ACTION: Notice of final determination.

SUMMARY: This document provides notice that U.S. Customs and Border Protection (“CBP”) has issued a final determination concerning the country of origin of certain monochrome laser printers and replacement toner cartridges. Based upon the facts presented, CBP has concluded that the country of origin of the monochrome laser printers and replacement toner cartridges in question is Japan, for purposes of U.S. Government procurement.

DATES: The final determination was issued on March 19, 2018. A copy of the final determination is attached. Any party-at-interest, as defined in 19 CFR 177.22(d), may seek judicial review of this final determination within [insert 30 days from date of publication in the Federal Register].

FOR FURTHER INFORMATION CONTACT: Yuliya A. Gulis, Valuation and Special Programs Branch, Regulations and Rulings, Office of Trade, at (202) 325-0042.

SUPPLEMENTARY INFORMATION: Notice is hereby given that on March 19, 2018 pursuant to subpart B of Part 177, U.S. Customs and Border Protection Regulations (19 CFR Part 177, subpart B), CBP issued a final determination concerning the country of origin of certain monochrome laser printers and replacement toner cartridges, which may be offered to the U.S. Government under an undesignated government procurement contract. This final determination, HQ H287548, was issued under procedures set forth at 19 CFR Part 177, subpart B, which

implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. §§ 2511-18).

In the final determination, CBP concluded that the country of origin of the monochrome laser printers is Japan for purposes of U.S. Government procurement. CBP also determined that the country of origin of replacement toner cartridges is Japan for purposes of U.S. Government procurement.

Section 177.29, CBP Regulations (19 CFR 177.29), provides that a notice of final determination shall be published in the **Federal Register** within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 CFR 177.30), provides that any party-at-interest, as defined in 19 CFR 177.22(d), may seek judicial review of a final determination within 30 days of publication of such determination in the **Federal Register**.

Dated: March 19, 2018

Alice A. Kipel
Executive Director
Regulations and Rulings
Office of Trade

HQ H287548

March 19, 2018

OT:RR:CTF:VS H287548 YAG

CATEGORY: Origin

Mr. Stanley R. Soya
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1299 Pennsylvania Avenue, NW
Washington, D.C. 20004-2400

RE: U.S. Government Procurement; Country of Origin of Monochrome Laser Printers and Replacement Toner Cartridges; Title III, Trade Agreements Act of 1979 (19 U.S.C. § 2511 *et seq.*); Subpart B, Part 177, CBP Regulations

Dear Mr. Soya:

This is in response to your correspondence, dated June 14, 2017, requesting a final determination, pursuant to subpart B of Part 177 of the U.S. Customs and Border Protection (“CBP”) Regulations (19 C.F.R. § 177.21 *et seq.*), on behalf of your clients, Brother Industries (U.S.A.) (“BIUS”) and Brother International Corporation (“BIC”) (collectively “Brother”), concerning the country of origin of monochrome laser printers and replacement toner cartridges.

We note that BIUS and BIC are parties-at-interest within the meaning of 19 C.F.R. § 177.22(d)(1) and are entitled to request this final determination.

FACTS:

Monochrome Laser Printers:

Brother plans to manufacture two new printer models in the United States: (1) the HL-L6400DWG, a printer, and (2) the MFC-L6900DWG, a multifunctional printer/scanner/copier/fax (collectively “monochrome laser printers”). These monochrome laser printers will be comprised of approximately 1,100 parts and components from several countries, including Japan, the Philippines, China, and Vietnam. The printers are comprised of 8 main subassemblies, as follows:

- (1) Main printed circuit board (“PCB”) assembly or motherboard of the machine: It will communicate with the PC, house the memory in the printer, and form the image printed on the page. The main component of the main PCB will be the Application Specific Integrated Circuit (“ASIC”), which includes the Central Processor Unit (“CPU”) and other functional circuits, including the mechanical control circuit, USB communication control circuit, printing data processing circuit, and memory control circuit. Most of the digital processing functions of the main PCB will be processed by the ASIC. The overall ASIC structure and each functional circuit will be designed in Japan and manufactured by third-party suppliers in Japan. The other main components of the main PCB, which include the random-access memory (“RAM”), read-only memory (“ROM”), electrically erasable programmable read-only memory (“EEPROM”), and printed circuit board, will be produced in various other countries. The components of the main PCB assembly will be assembled in Japan.

- (2) Firmware: The firmware will be software embedded in the main PCB of the machines to provide the control program for the device. The overall design and most steps in the development of the firmware will be performed in Japan.
- (3) Fuser unit: The fuser unit will apply pressure and heat to the printed page to enable toner to permanently melt onto it. The main components of the fuser unit, including a pressure roller, halogen lamp, thermistor sensor, drive gear, upper case, and lower case, will be produced in various countries. The components of the fuser unit will be assembled in Vietnam.
- (4) Automatic Document Feeder (“ADF”) unit: The ADF unit takes up to 80 pages and feeds them one page at a time into the scanner, allowing for the copying, printing or faxing of multi-page documents without requiring the user to manually replace each page. This subassembly will be available for the MFC-L6900DWG. The main components of the ADF unit, including ADF cover, document cover, and document separate roller will be produced in various countries, and assembled in Vietnam.
- (5) Organic Photo Conductor (“OPC”) drum unit: The OPC drum unit is an aluminum cylinder that attracts toner using an electrostatic charge that is transferred to paper to create a printed image. The main components of the OPC drum unit, including the OPC drum, corona wire, drive gear, and case, will be produced in various countries, and assembled in Vietnam.
- (6) Toner cartridge: The toner cartridge will hold the toner that is transferred to an electrostatically charged OPC drum. The main component of the toner cartridge, the toner powder, will be produced in Japan. All other components of the toner cartridge, including the developer roller, agitator, supply roller, drive gear, and cases, are produced in various countries. The components of the toner cartridge will be assembled in Vietnam.
- (7) Operation panel unit: The operation panel unit controls printer functions and communicates information about the printer and print jobs. The main components of the operation panel unit, including the LCD assembly, which displays the machine status and menu, the LCD control board, touch sensor, key switch, and panel cover, will be produced in various countries, and will be assembled in Vietnam.

- (8) Body unit: The body unit consists of various components, such as the cover and frame, paper tray, high-voltage and low-voltage power supply boards, paper feeder, laser unit, flatbed document scanner, and modem board. These components will come from various countries, and will be assembled in Vietnam.

It is claimed that the main PCB assembly and the firmware represent the “brains” of the printer. Further, it is claimed that the Vietnamese subassembly production of the fuser unit, ADF unit, OPC drum unit, toner cartridge, and body unit, as described above, does not require sophisticated skills or expensive machinery. The subassemblies will be generally assembled in Vietnam by using jigs and an electric screwdriver to connect the individual parts of each unit together.

The final manufacturing operations of the monochrome laser printers will take place in the United States, and will take approximately 40 minutes to complete (this timeframe includes testing of the final product). The manufacturing process for two models of the monochrome laser printers slightly differs in steps, but in both cases, the process involves threading brittle wires through spaces into necessary ports to connect various subassemblies, which requires a degree of precision to ensure that cables and connectors are not damaged or improperly connected. Counsel provided a step-by-step description of the finished printer assembly. Counsel also highlighted the complexity of the process by indicating the fact that, if inserted incorrectly, the cables (which are thin strips of conductive aluminum, coated in a thin layer of insulating material) can break and cause the printer to malfunction throughout its lifecycle. Moreover, there are several cables that, if damaged during the assembly, will require replacement of the entire subassembly upon which the cable is soldered. The main PCB assembly and the firmware, though produced in Japan, will be integrated into the printers in the United States.

Once assembly is completed, both printer models will undergo testing and inspection, which is customized by Brother in Japan to ensure optimal functionality of each printer. Testing and inspection includes not only running Brother’s proprietary inspection system, but also a manual inspection of components and overall functioning of the product. These steps will include verifying and installing the firmware to the main PCB assembly and calibrating the position of the laser beam’s exposure starting point.

Finally, counsel emphasizes that Brother employees responsible for assembling, inspecting and testing the printers in the United States will be required to undergo approximately two weeks of customized training.

Replacement toner cartridges:

Brother also plans to sell new replacement toner cartridges to the U.S. Government as a separate consumable end-product. The toner cartridges can be used interchangeably in both the model HL-L6400DWG, printer; and the model MFC-L6900DWG, printer/scanner/copier/fax. The cartridges will be mainly comprised of the following parts: (1) toner powder; (2) supply

rollers; (3) developer roller; (4) toner uniform blade; and, (5) cleaning unit. Counsel maintains that the toner powder is the most critical component of the cartridge, as it is a complex powder that allows the printers to form an image on paper. Brother's toner powder will be developed and manufactured in Japan at a toner manufacturer's facility. The toner powder will account for approximately 40% of the total parts and cost of the toner cartridges. The finished cartridge will be made of 29 parts from Japan, Vietnam, China, Philippines, Malaysia, and Indonesia. All these components will be brought together by the manufacturing process in Japan to build the replacement cartridges. The most expensive parts of the cartridge include: (1) the toner powder, which is manufactured in Japan; (2) the developer roller, which will be manufactured in Japan and the Philippines; and, (3) the supply roller and the blade, which will be manufactured in China. Counsel claims that the country of origin of Brother replacement toner cartridges is Japan.

ISSUE:

What is the country of origin of the monochrome laser printers and replacement toner cartridges for purposes of U.S. Government procurement?

LAW AND ANALYSIS:

CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government, pursuant to subpart B of Part 177, 19 C.F.R. § 177.21 *et seq.*, which implements Title III of the Trade Agreements Act of 1979 ("TAA"), as amended (19 U.S.C. § 2511 *et seq.*).

Under the rule of origin set forth under 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

See also 19 C.F.R. § 177.22(a).

In rendering final determinations for purposes of U.S. Government procurement, CBP applies the provisions of subpart B of Part 177 consistent with the Federal Procurement Regulations. *See* 19 C.F.R. § 177.21. In this regard, CBP recognizes that the Federal Acquisition Regulations restrict the U.S. Government's purchase of products to U.S.-made or designated country end products for acquisitions subject to the Trade Agreements Act. *See* 48 C.F.R. § 25.403(c)(1). The Federal Acquisition Regulations define "U.S.-made end product" as "an article that is mined, produced, or manufactured in the United States or that is substantially transformed in the United States into a new and different article of commerce with a name,

character, or use distinct from that of the article or articles from which it was transformed.” See 48 C.F.R § 25.003.

In determining whether the combining of parts or materials constitutes a substantial transformation, the determinative issue is the extent of the operations performed and whether the parts lose their identity and become an integral part of the new article. *Belcrest Linens v. United States*, 6 C.I.T. 204, 573 F. Supp. 1149 (1983), *aff’d*, 741 F.2d 1368 (Fed. Cir. 1984). If the manufacturing or combining process is a minor one that leaves the identity of the imported article intact, a substantial transformation has not occurred. *Uniroyal, Inc. v. United States*, 3 C.I.T. 220, 542 F. Supp. 1026 (1982).

In *Energizer Battery, Inc. v. United States*, 190 F. Supp. 3d 1308 (2016), the Court of International Trade (“CIT”) interpreted the meaning of “substantial transformation” as used in the TAA for purposes of government procurement. *Energizer* involved the determination of the country of origin of a flashlight, referred to as the Generation II flashlight, under the TAA. All of the components of the Generation II flashlight were of Chinese origin, except for a white LED and a hydrogen getter. The components were imported into the United States where they were assembled into the finished Generation II flashlight.

The court reviewed the “name, character and use” test utilized in determining whether a substantial transformation has occurred and noted, citing *Uniroyal, Inc. v. United States*, 3 C.I.T. at 226, 542 F. Supp. at 1031, *aff’d*, 702 F.2d 1022 (Fed. Cir. 1983), that when “the post-importation processing consists of assembly, courts have been reluctant to find a change in character, particularly when the imported articles do not undergo a physical change.” *Energizer* at 1318. In addition, the court noted that “when the end-use was pre-determined at the time of importation, courts have generally not found a change in use.” *Energizer* at 1319, citing as an example, *National Hand Tool Corp. v. United States*, 16 C.I.T. 308, 310, *aff’d*, 989 F.2d 1201 (Fed. Cir. 1993). Furthermore, courts have considered the nature of the assembly, *i.e.*, whether it is a simple assembly or more complex, such that individual parts lose their separate identities and become integral parts of a new article.

In reaching its decision in *Energizer*, the court expressed the question as one of whether the imported components retained their names after they were assembled into the finished Generation II flashlights. The court found “[t]he constitutive components of the Generation II flashlight do not lose their individual names as a result [of] the post-importation assembly.” The court also found that the components had a pre-determined end-use as parts and components of a Generation II flashlight at the time of importation and did not undergo a change in use due to the post-importation assembly process. Finally, the court did not find the assembly process to be sufficiently complex as to constitute a substantial transformation. Thus, the court found that Energizer’s imported components did not undergo a change in name, character, or use as a result of the post-importation assembly of the components into a finished Generation II flashlight. Virtually all of the components of the military Generation II flashlight, including the most important component, the LED, were of Chinese origin. Thus, the court determined that China was the correct country of origin of the finished Generation II flashlights under the government procurement provisions of the TAA.

Monochrome Laser Printers:

In this case, counsel argues that the country of origin of the monochrome laser printers at issue will be the United States because the printers will be assembled in a process that involves: (1) complex post-importation assembly operations; (2) the installation of the main PCB assembly and a firmware verification and download; and, (3) a customized testing and inspection process. In support of its position, counsel cites Headquarters Ruling Letters (“HQ”) H241146, dated May 21, 2013; HQ H185775, dated December 21, 2011; and, HQ 560677, dated February 3, 1998. We disagree.

In HQ H241146, CBP considered the country of origin of monochrome laser printers. In that case, Chinese subassemblies were imported into the United States, where they were assembled with U.S.-origin PCBs, and programmed with Japanese-origin firmware. CBP found that the last substantial transformation occurred in the United States. While the printers were comprised of subassemblies and components from various countries, they were also comprised of a controller unit assembled in the United States (with U.S.-origin PCBs), which was important to the function of the printers. We note that the case at issue is distinguishable from HQ H241146 because in addition to the final printer assembly in the United States, the printers in HQ H241146 contained U.S.-origin PCBs.

In HQ H185775, CBP considered the country of origin of a multifunction office machine. In that case, the incomplete print engine was produced in Vietnam and consisted of a metal frame, plastic skins, motors, controller board with supplier-provided firmware, a laser scanning system, paper trays, cabling paper transport rollers, and miscellaneous sensing and imaging systems. The incomplete print engine was shipped to Mexico, where the following assemblies were added: the formatter board, scanner/automatic document feeder, control panel, fax card, hard disk drive/solid state drive, firmware (which was developed and written in the United States), along with other minor components and accessories. CBP determined that Mexico was the country of origin because the assembly of the various components resulted in a substantial transformation. We find HQ H185775 distinguishable because the assembly in Mexico involved multiple components from various countries, including TAA-designated countries.

In HQ 560677, CBP considered two different notebook computers manufactured in the United States with parts and components from various countries. CBP concluded that the foreign components used in the manufacture of the notebook computers lost their separate identities and became an integral part of a notebook computer as a result of the operations performed in the United States. We note that HQ 560677 specifically pertains to notebook computers, which is a different product from the monochrome laser printers at issue, and CBP has considered many other scenarios involving the production of printers that are more relevant to this case.

For example, in HQ H219519, dated April 3, 2013, CBP considered the country of origin of a color printer and fax machine under three different scenarios. In scenarios one and two, the color printer and fax machine underwent the following operations in Mexico: final assembly, downloading firmware written in the United States, and testing, which included making settings appropriate to the buyer’s country and the client’s specific needs. In scenario one, the assembly took 3-4 minutes whereby the external memory drive was installed onto the formatter and the

cables were routed as necessary. The firmware for the engine and formatter was downloaded onto the hard drive or solid state drive. In scenario two, the assembly took 7-8 minutes and involved the assembly discussed in scenario one, plus the installation of the intermediate transfer belt. In both scenarios, the testing took 7-14 minutes and included making certain settings for the language, paper, functionality, and other feature settings, as described above. In scenario three, the color printer and fax machine underwent assembly in Mexico that took 2-3 minutes, the firmware for the sub-systems (engine, formatter) was downloaded onto the hard drive or solid state drive, and the product underwent testing. The cost of the incomplete print engine was the most expensive of the hardware components, with the formatter board being the second-most expensive component. CBP determined that the country of origin of the imported printers was China under all three scenarios, since the assembly performed in Mexico was not significant enough to result in a substantial transformation of the Chinese components and subassemblies. In reaching its decision, CBP emphasized that all of the components were produced in China (with the exception of the hard disk from Malaysia), including all the significant parts that were the essence of the finished product, particularly the high-cost print engine and formatter board.

With respect to the final assembly processes in the United States, we find that this case is similar to HQ H219519 and the CIT's decision in *Energizer* because the assembly process in the United States is not sufficiently complex for the last substantial transformation to occur in the United States. Rather, all of the fully finished printer subassemblies are manufactured in Vietnam, and the PCB and firmware are made in Japan. Thus, substantial manufacturing operations are performed in these countries. Once the Vietnamese subassemblies and the Japanese-origin PCB are imported into the United States, these 10 subassemblies are soldered/wired together, and programmed with the Japanese-origin firmware. All of these processes, including the testing of the finished printer (which accounts for half of the time of the printer's manufacture), are concluded in just 40 minutes. The manufacturing processes of these subassemblies in the United States do not rise to the level of complex processes necessary for a substantial transformation to occur. In fact, the end-use of the imported and fully assembled subassemblies is already pre-determined at the time of importation. *See Energizer* at 1319. Additionally, despite counsel's attempt to make the manufacturing processes in the United States appear to be more complex, upon reviewing the provided materials, we find that "threading brittle wires through spaces into necessary ports to connect various subassemblies" amounts to nothing more than simply feeding the wiring harnesses through designated areas, especially considering that the subassemblies in question are already manufactured in a manner that allows for a relatively easy downstream installation. Accordingly, the manufacturing processes that occur in the United States will not subsume the individual subassemblies into a new and distinct article of commerce that has a new name, character, and use.

As discussed in *Energizer*, in cases in which the post-importation processing entails assembly, courts have considered the nature of the assembly together with the name, character, or use test in making a substantial transformation determination. *See Ran-Paige Co., Inc. v. United States*, 35 Fed. Cl. 117, 121 (1996); *Belcrest Linens*, 741 F.2d at 1371; *Uniroyal*, 3 C.I.T. at 226, 542 F. Supp. at 1031. The court has sometimes compared the degree of operations in pre versus post-importation processing to evaluate whether a substantial transformation occurred. For example, in *Nat'l Hand Tool*, the court contrasted the pre-importation processing of cold forming and hot-forging and noted that it required more complicated functions than post-importation processing, which included heat treatment and electroplating. 16 C.I.T. at 311; *see*

also Uniroyal, 3 C.I.T. at 224-227, 542 F.Supp. at 1029-31 (comparing a post-importation “minor manufacturing or combining process” in which imported shoe uppers were attached to outsoles with “complex manufacturing processes” that occurred pre-importation when the imported uppers were produced). In such cases, CBP has focused on the importance of other components to make an origin determination.

For example, in HQ H018467, dated January 4, 2008, CBP was asked to consider two manufacturing scenarios for multi-function printers. In one scenario, manufacturing took place in two countries; in the other, it took place in three countries. In the two-country scenario, 18 units were manufactured in the Philippines from components produced in various countries. The units were sent to Japan where the system control board, engine control board, OPC drum unit, and the toner reservoir were manufactured and incorporated into the units. The control boards were programmed in Japan with Japanese firmware that controlled the user interface, imaging, memories, and the mechanics of the machines. The machines were then inspected and adjusted as necessary. CBP found that the manufacturing operations in Japan substantially transformed the Philippine units such that Japan was the country of origin of the multifunctional machines. In making the determination (and in addition to the finding that operations performed in Japan were meaningful and complex and resulted in an article of commerce with a new name, character and use), CBP took into consideration the fact that the system control board, the engine control board, and the firmware, which were very important to the functionality of the machines, were manufactured in Japan.

Similarly, in HQ W563491, dated February 8, 2007, CBP was asked to consider a two-country scenario where all of the subassemblies of the multifunction machine were made in China, with the exception of the controller unit subassembly, application specific integrated circuits and firmware, which were made in Japan. In that case, the final assembly, testing, and the final inspection were done in Japan. Although CBP stated that the product assembly in Japan was also complex and meaningful, CBP focused on the origin of key components in finding that the country of origin was Japan. *See also* HQ H020516, dated November 7, 2008 (CBP considered Sharp Andromeda II J models composed of eight main subassemblies, two of which involved processing in Japan. All the engineering, development, design, and artwork were developed in Japan. The multifunctional printer control unit was described as the brain of the model. While some of the components were installed on the control printer board in China, the flash read-only memory which included firmware developed in Japan, was manufactured in Japan. The other unit that involved production in Japan was the process unit, that housed a drum produced in Japan. The process unit was assembled in China. The other subassemblies were assembled in China but certain key components of the subassemblies originated in Japan. The final assembly was performed in Japan. Based on the totality of the circumstances discussed in this ruling, CBP agreed that the Jupiter II J-models were considered a product of Japan).

Similar to HQ H018467, HQ W563491, and HQ H020516, in this case, the main PCB assembly is the motherboard of the printers, which communicates with the PC, houses the memory in the printer, and forms the image printed on the page. It also includes key functional circuits, including mechanical control and printing data processing. Additionally, the overall structure and each functional circuit of the ASIC, the main component of PCB, will be designed in Japan and manufactured by third-party suppliers in Japan.

The firmware itself provides the control program for the printers and enables the main PCB assembly to function as the electronic “brains” of the printers by controlling all printer functions. The main PCB assembly (consisting of approximately 1,028 components) and the firmware, produced in Japan, a TAA-designated country, account for a significant percentage of the total subassembly cost. Together, the firmware and the main PCB, which serve major functions and are high in value, constitute the essential character of the printers. We note that in the three rulings referenced above, the key components and the firmware were manufactured and developed in the same country in which the final assembly took place. This is not the case here. However, considering that the production of the printer occurs in three countries, we find the last substantial transformation to occur in Japan, given that the essential character of the printer is made in Japan. Accordingly, we find that Japan is the country of origin of the monochrome laser printers.

Replacement toner cartridges:

Finally, counsel argues that Japan is the country of origin for the Brother replacement toner cartridges. Several CBP rulings are cited in counsel’s submission. HQ H251592, dated June 24, 2014, describes an AIO cartridge with three main components: 1) toner powder; 2) developer unit; and, 3) cleaning unit. In HQ H251592, CBP determined that the processing in Japan substantially transformed the non-Japanese components. We find that a similar rationale can be applied to Brother’s replacement cartridges. Therefore, it is the opinion of this office that the country of origin of the replacement toner cartridges will be Japan.

HOLDING:

Based on the facts provided, the imported fully assembled printer subassemblies from Japan and Vietnam will not be substantially transformed into finished monochrome laser printers by the processes that take place in the United States. However, the finished monochrome laser printers will be considered a product of Japan for purposes of U.S. Government procurement. With respect to the Brother replacement toner cartridges, the country of origin will be Japan.

Notice of this final determination will be given in the Federal Register, as required by 19 C.F.R. § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 C.F.R. § 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 C.F.R. § 177.30, any party-at-interest may, within 30 days of publication of the Federal Register Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Monika R. Brenner
for
Alice A. Kipel, Executive Director
Regulations and Rulings
Office of Trade